

POST-HARVEST DRYING OF LARGE CARDAMOM BY AN ELECTRIC DRYER: PERCEPTIONS ABOUT THE DRYER AND ADDED VALUE



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Background

- AEPC, a focal institution of Nepal government to deal with development and promotion of RET and Micro Hydro Plants (MHPs), has been promoting MHPs in the rural areas
- Underutilized condition of MHPs (about 30% of the total power generated by MHPs is being used, mostly for the lighting purpose)
- >90 MHPs are established and operational in the east Nepal, a major cardamom growing areas
- Use of traditional dryers causes *low quality* cardamom thereby suffering from market and price, AEPC realized that **electric dryer** can be the option to **HIT** the issues like low quality of cardamom and long term sustainability of MHPs



Background...

And, they installed **Electric Dryer** in Pachathar District



Objective

1. To understand how the users' perceive electric dryer
2. To know what the value additions are



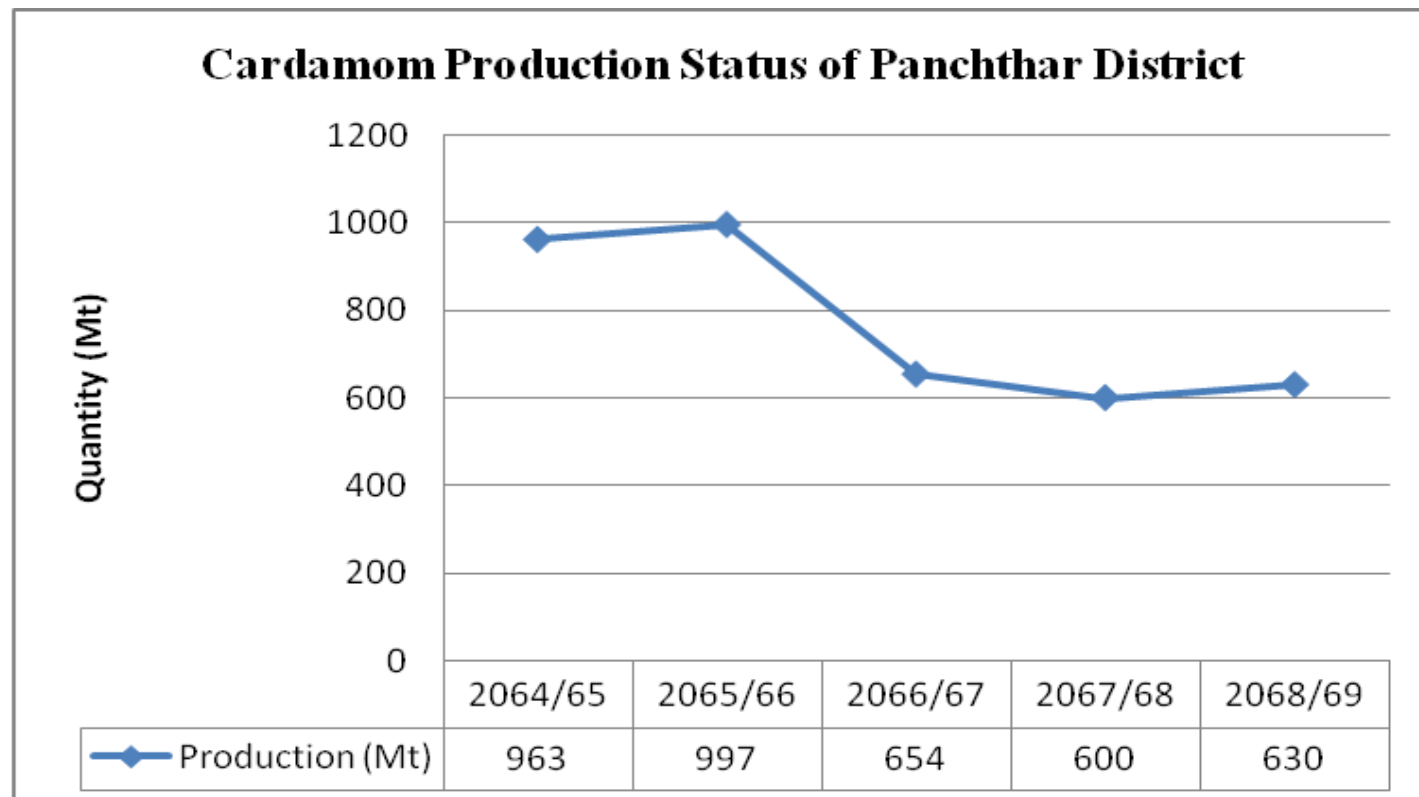
Relevancy

1. Success of the technology helps in long term sustainability of MHPs by utilizing maximum power generated by them thereby generating the revenues
2. It can make huge difference in livelihood of smallholder rural farmers by producing better quality cardamom thereby providing wider market access. In large cardamom, drying is the key to determine quality. Use of traditional dryers causing poor quality
3. >100000 smallholder households are directly engaged in cultivation of large cardamom
4. Priority commodity of Nepal Government for export

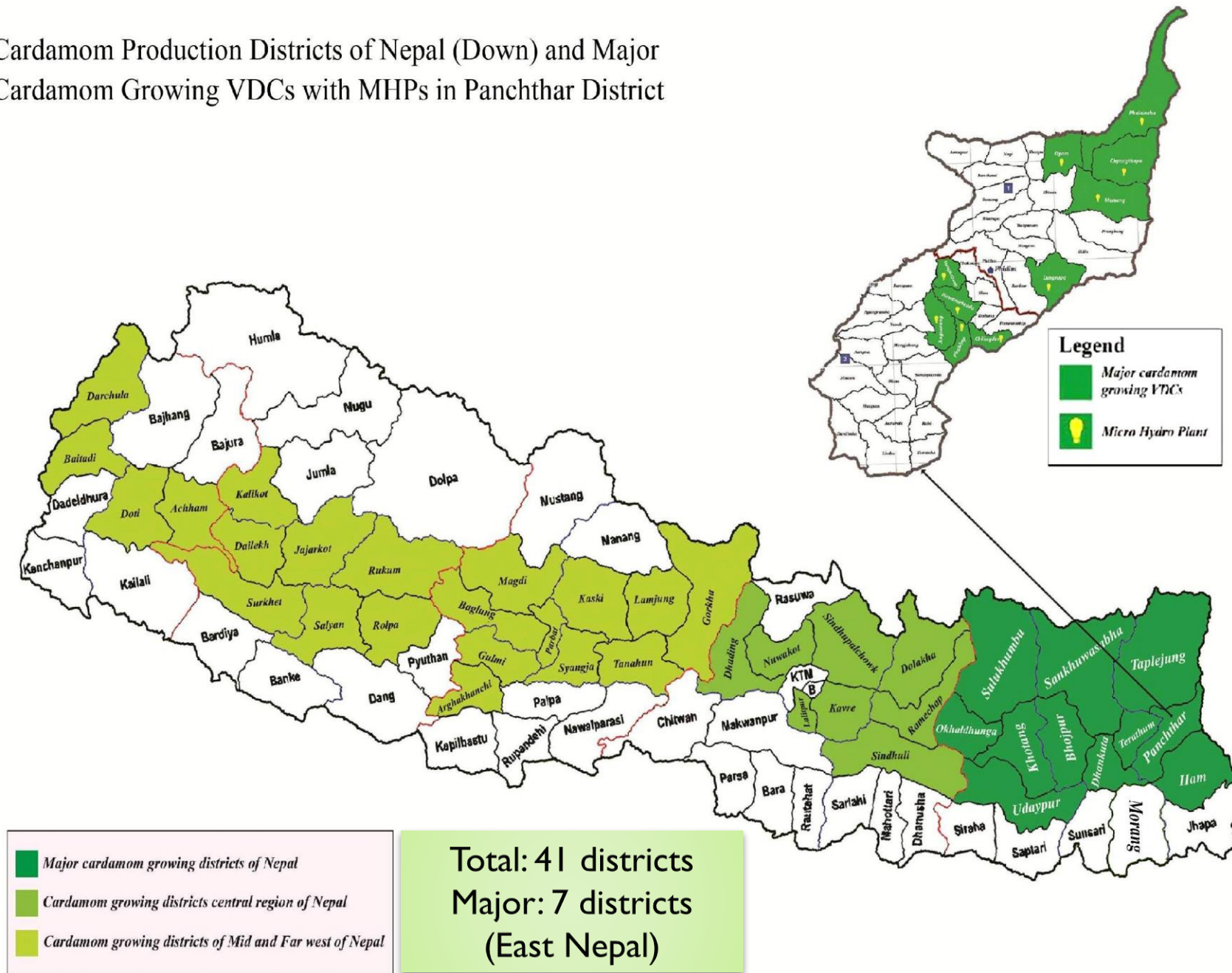
Large cardamom: production

- Large cardamom, commonly known as *alichi* is a high value cash crop
- One of export potential commodities
- Market price is increasing, production decreasing

Production status of large cardamom in one of the east district (Panchtha) of Nepal



Cardamom Production Districts of Nepal (Down) and Major Cardamom Growing VDCs with MHPs in Panchthar District



Large cardamom: processing/drying and market

Drying process: a key to determine quality of cardamom

Types of Dryers

- Double Drum Dryer, Gasifier, rocket stove, traditional with mud wall are some of the dryers used for drying large cardamom, however the *traditional dryer is still dominant*
- Issues in traditional dryers:
 - Labor intensive
 - Poor and inconsistent quality



Large cardamom: processing and market

Market

- World's largest exporter (Occupies nearly 25%) (Source: SNV Report)
- >5500 MT export (official record), unrecorded even goes up to 8000 MT per year
- 95% goes to India which is re-export to other countries like Pakistan, UK, Gulf and other countries

Price

- Fluctuates but fluctuation takes place in cyclical manner (11 year period) (Global Cardamom Markets, Rapid Assessment. Zoya Vassilieva, SNV. 2005)

Design or methodology

- Observation, interview and focus group discussion are the key tools used to collect perceptions
- Checklists are also used to organize discussions
- Informants are purposively selected; total 50 informants, producers (n = 25), managers (n = 2), dryer operators (n = 2), committee members (n = 9) and the traders of local, district and regional market (n = 12)

Major results

Perception

Local users

- Perceived as the best drying system : requires minimum time and labor and high quality of cardamom

Market/Buyers

- Preferred quality : adequately dried, good appearance, clean and uniform size
- 'Smoke-free' feature is additional value
- Most interestingly, cardamom dried in electric dryer receives 1500-2500 NRs/40 Kg irrespective of size

Major results...

Value Addition

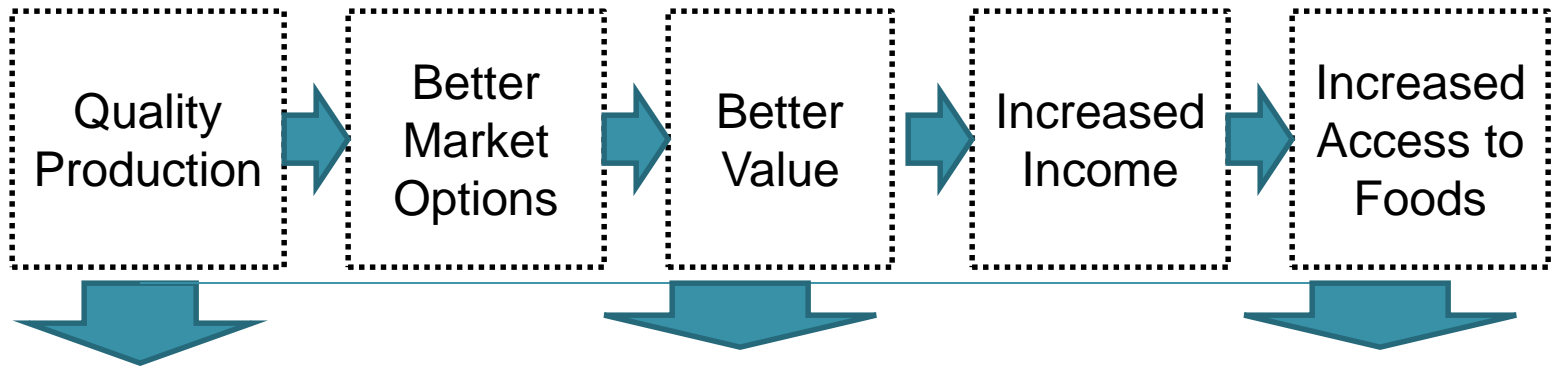
- At household level: additional income NRs 55,000/- NRs (\$ 580) per year
- With only 50% coverage of total MH beneficiaries of 7 eastern districts, that quantity occupies 21% of the total export and it generates at least 7 million dollar additional income per year

Major conclusions

Conclusion-I

- It can bring huge changes in livelihood of thousands of rural population by :
 - Providing better market options with better prices (present time)
 - Securing better prices even at the fall of prices at global market (future situation)

Major conclusions...



Agriculture to Nutrition Pathway

Agriculture to
Market/Home
Production



Market/Home
Production to
Household Food
Availability, Access
and Use



Availability, Access
and Dietary Intake &
Health Outcomes of
Women & Young
Children

Identifying, Defining, Measuring Linkages and Evidence Gaps



Major conclusions

Conclusion-II

This electric dryer can be promoted at commercial scale to benefit larger number of smallholder cardamom growers of Nepal



Thank You!!!

